

**U.S. Consumer Product Safety Commission
LOG OF MEETING**

SUBJECT: UL 982 Working Group Meeting on Juice Extractors

DATE OF MEETING: Nov 28, 2001

LOG ENTRY SOURCE: Vincent J. Amodoe

DATE OF LOG ENTRY: Apr 18, 2002

LOCATION: UL Laboratories, Melville, NY

CPSC ATTENDEE(S): Vincent J. Amodoe ESME

**NON-CPSC ATTENDEE(S): Darrin Conlon, UL Tech Rep Chairman
Matt Carley, Hamilton Beach/Proctor-Silex
Randy Hill, KitchenAid/Whirlpool
Joe Kata, Norelco
Bill Mulligan, Applica
Wayne Morris, AHAM
Edward Charkey, Self, PE
Mark Connelly, Consumers Union
Jim Diescher, Intertek Technical Services
Richard Haffner NSF International
Randall Hoover, Rival/The Holmes Group
Ralph Hudnall, Sunbeam Products, Inc
Larry Johnson, National Presto
Lawrence Levine, Creative Services
Chris Zachwieja, Hamilton Beach/Proctor Silex
Laura Schroepel, UL
David Wester, UL**

6(b) CLEARED:

☒ **No Mfrs Identified**
☐ **Excepted**
☐ **Mfrs Notified**
☐ **Comments Processed**

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SUMMARY OF MEETING: The overall meeting was to review proposed changes to UL 982 for Motor-Operated Household Food Preparing Machines and efforts to harmonize UL 982 with International Electrotechnical Committee (IEC) standards. As an included effort in this meeting, was the establishment of an STP working group to address Juice Extractors. The objective of the working group is to determine what actions are needed or what additional tests should be conducted on juice extractors to allow detection of reported safety problem and to determine where new requirements should be added to the UL standard. Volunteers were selected to form the UL 982 Juice Extractor Working Group for future action. See attached file for summary of the overall meeting, see Appendix B.1. for Juice Extractor Working Group.

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Subject 982

1285 Walt Whitman Road
Melville, L.I., NY 11747
January 2, 2002

**TO: Standards Technical Panel (STP) for Motor-Operated Household Food Preparing Machines, STP 982
Subscribers to UL's Standards Service for Motor-Operated Household Food Preparing Machines
Other Interested Parties**

SUBJECT: Report of the Meeting of the Standards Technical Panel of UL for Motor-Operated Household Food Preparing Machines;

The following topics were discussed at the meeting:

- 1. Call to order/Introduction of members, guests, and observers**
- 2. Additions or corrections to the agenda:**
 - a) Impact of recent juice extractor recall on safety requirements in the UL 982 Standard**
- 3. Announcements and reports from the Secretary**
- 4. Presentation on the STP process**
- 5. Discussion of the working draft to be proposed as the first edition of UL 60335-2-14:**
 - a) Background of overall UL harmonization efforts with other standards bodies.**
 - b) Overview of UL's Basic Safety Principles and possible impact on the proposed first edition**
 - c) Review and discussion of UL 982 deviations to IEC 60335-2-14 baseline requirements. (NOTE: This discussion will also include an assessment of UL versus IEC worst-case testing of products falling within the scope of this subject.)**
 - d) Fourth edition of IEC 60335-1 and possible changes to first edition to be proposed**
- 6. Inclusion of Requirements for 240 Volt Products**
- 7. Revision to Requirements for Flooding of Live Parts**
- 8. Revision of Requirements for Running-Burnout Conditioning Test**
- 9. Revision of Requirements for Blenders**
- 10. Addition of Requirements for Appliances Employing an Auto-pulse Function Switch**
- 11. Applicability of Flammability Requirements for Polymeric Enclosures in UL 746C to UL 982**

12. Future meeting schedule.**13. Miscellaneous**

A meeting of the Standards Technical Panel for Motor-Operated Household Food Preparing Machines was held on November 28 and 29, 2001 at UL's Melville office. The purpose of the meeting was to initiate harmonization review of the working draft of an IEC-based UL Standard to eventually be proposed as a first edition (Safety of Household and Similar Electrical Equipment Appliances, Part 2: Particular Requirements for Kitchen Machines, UL 60335-2-14); to discuss action to be taken as the result of a voluntary manufacturer recall of juice extracting machines recently announced by the Consumer Product Safety Commission (CPSC), to discuss several proposals for the UL 982 Standard originally submitted for ballot in a bulletin dated February 1, 2001 and subsequently revised as a result of member comments, and to discuss the Basic Safety Principles as possible future requirements to be adopted in harmonized standards.

INSTRUCTIONS**STP Members:**

If you are a voting member of the STP, complete the attached ballot with your vote on the standard or proposals. Please note that all negative ballots must be accompanied by supporting written reasons and, where possible, proposals for a solution to the problem raised.

Impact statements and effective date information are not subject to letter ballot. Therefore, comments regarding impact statements and effective dates may be made and should be sent to the STP Secretary separate from the letter ballot.

Subscribers and other interested parties:

If you are a subscriber or other interested party, you are requested to send comments on the proposed requirements, impact statements, and proposed effective date to the STP Secretary. The STP member ballot should not be used to submit your comments.

Comments should be made in writing and may be sent by fax to (631) 439-6021 or by mail to the attention of David R. Wester at UL's Melville office. Comments may also be sent via E-mail to David.R.Wester@us.ul.com. Please reference all correspondence to Subject 982. Note all comments received are public and may be circulated to others. If you respond by fax or E-mail, please include your full name and company name and address to ensure a reply.

STP BALLOTS AND ALL COMMENTS DUE: FEBRUARY 15, 2002

Attached as Appendix A for your review and comment are proposed requirements for UL 982. Attached as Appendix B is information regarding Working Groups. Attached as Appendix C for your review and comment are the impact statements and proposed effective dates. Attached as Appendix D is the STP membership roster. Attached as Appendices E and F are the STP instructions and ballot, respectively. Attached as Appendix G is a list of those who attended the meeting. Attached H is a list of action items assigned during meeting discussion. Attached as Appendix I is a partial list of responses to action items that UL received from outside sources.

Questions regarding interpretation of requirements should be directed to the responsible UL Staff. Please see Appendix J of this bulletin regarding designated responsibility for the subject product category.

Please note that proposed requirements are of a tentative and early nature and are for review and comment only. Current requirements are to be used to judge a product until these requirements are published in final form.

The following report is not intended to be a verbatim transcript of the discussion at the meeting, but is intended to record the significant features of those discussions.

1. CALL TO ORDER/INTRODUCTION OF MEMBERS, GUESTS, AND OBSERVERS

DISCUSSION

The Chairman welcomed all of the participants for the first STP 982 meeting, and outlined the topics to be covered and objectives to be achieved. After the attendees introduced themselves, the Chairman briefly described the duties of the constituent parts of the STP, which include the Chairman, Secretary, UL Technical Representative (Tech Rep), and the individual members.

Open participation in the STP meeting and overall process was encouraged. A ground rule was established to allow anyone in attendance (including observers) to offer comments, to ask questions, and to make suggestions during discussion of any agenda item.

2A. IMPACT OF RECENT JUICE EXTRACTOR RECALL ON UL SAFETY REQUIREMENTS

The STP Chairman accepted the introduction of a new agenda item and, per prior arrangement with the observer from the Consumer Product Safety Commission (CPSC), this discussion took place before the STP became involved in detailed discussions on other topics. No objections were raised.

The CPSC recently publicized the voluntary recall of about 2.4 million juice extractors by the manufacturer due to a problem with the strainer basket breaking apart during operation which may also cause the lid to fly off or break apart. The manufacturer received a number of incident reports from within the U.S. and Canada, and a small fraction of these actually resulted in injuries to persons standing near the appliance. The STP wished to determine what changes, if any, to the safety requirements in the UL 982 Standard should be considered in order to strengthen them in view of occurrences of this nature. The CPSC observer was invited to the meeting to listen to these details.

The UL Tech Rep reported that nine recalls of this type of product had taken place in North America and Europe since 1993. One possibility is that the plastic and metal in the rotating strainer disk, a removable part, could have eroded from repeated washings in the dishwasher.

The UL Tech Rep stated that two changes in requirements included in the revision pages to UL 982 dated November 29, 2001 could offer some indirect protection when these requirements take effect:

- Paragraph 21.9.9.4 states that a centrifugal juicer shall be provided with a cover-actuated interlock which complies with the requirements in 21.9.5.3. Paragraph 21.9.5.3 specifies how quickly moving parts should stop when the cover is removed, and what the maximum opening between the bowl and cover shall be (to restrict access to moving parts) in case the cover is able to actuate the interlock switch without being locked in place.
- Paragraph 40.5.1.3 states that the appropriate impact test, in accordance with 40.5.1.1 and 40.5.1.2, shall also be conducted on guards of moving parts capable of causing injury. Paragraph 40.5.1.1 is a general statement that hand-supported sections of an appliance having more than one section shall comply with the requirements for a hand-supported appliance (impact tests in 40.5.2) and counter-supported sections of an appliance having more than one section shall comply with the requirements for a counter-supported appliance (impact tests in 40.5.3). 40.5.1.2 is a general statement that an appliance meeting the definition of both a hand-supported appliance and a counter-supported appliance shall comply with the requirements for both types.

The STP agreed to form a Working Group to study possible direct changes to the requirements in the Standard and a number of attendees, including CPSC, agreed to participate (see Appendix B for roster). The UL Tech Rep suggested some type of dishwasher detergent conditioning of the suspect parts as an initial area for study, similar to what is done in the Standard for Household Dishwashers, UL 749. This would probably involve immersion in a detergent solution, long term exposure at an elevated ambient temperature, and a test of tensile strength and tensile impact afterward. The Working Group will decide what tests or actions are required for the investigation and will submit a report to the STP Chairman at a date to be determined.

The UL Tech Rep stated a preference to target any future UL 982 proposals to the UL 60335-2-14 Standard now in work, which will be the product of a harmonization between UL 982 and the corresponding IEC Part 2 standard, 60335-2-14. However, some changes to UL 982 may still be necessary in the interim.

3. ANNOUNCEMENTS AND REPORTS FROM THE SECRETARY

The STP Secretary described recent and upcoming activity concerning UL 982:

UL submitted a proposal bulletin dated February 1, 2001 that described a total of 20 groups of desired changes to the Fourth Edition of UL 982. Fifteen of these proposals were accepted without comment and are now contained in the revision pages dated November 29, 2001. The other five were revised and included in the agenda to be reviewed at this STP meeting. These items will either be attached to the meeting report with a ballot or, if further rework is required as a result of meeting discussion, will be submitted in a separate proposal bulletin in the near future following release of the meeting report.

The approval of UL 982 as an American National Standards Institute (ANSI) Standard is now over five years old and must be renewed. UL is in the process of submitting the entire Standard, which now includes the revision pages dated November 29, 2001, to the STP for ballot and to public review for comment only. Once an STP consensus in the voting is achieved and all comments, if any, are resolved, then UL 982 will have current ANSI approval (according to ANSI continuous maintenance guidelines).

The STP Secretary noted that the five groups of repropoed items can be adopted into UL 982 only after the ANSI approval of the Standard is updated.

The STP Secretary also distributed a survey sheet to all non-UL attendees, which solicited an appraisal of different aspects of the STP meeting, and requested that it be completed as soon as possible. The UL Global Standards Dept. will review the responses and recommend improvements to the general meeting method as necessary.

4. PRESENTATION OF THE STP PROCESS

Ms. Deborah Prince, from Global Standards in the UL office at Research Triangle Park (NC), gave a brief overview of the STP process, and reinforced key definitions and rules that each member should be aware of as STP activity increases. The meeting agenda included a condensed version of the official STP presentation, which will not be included in this report.

Additional details about a wide variety of topics involving UL Standards, including harmonization and the STP methodology, are available on-line at:

<http://ulstandardsinfo.net.ul.com>

5A. BACKGROUND OF OVERALL UL HARMONIZATION EFFORTS WITH OTHER STANDARDS BODIES

OVERVIEW

An STP member offered some brief remarks about the need for the participation of US companies in the International Electrotechnical Committee (IEC) meetings and harmonization process. Now that UL has started harmonizing with the IEC 60335 Part 1 and several Part 2 Standards, the US community has an opportunity to start submitting new work proposals through the US Technical Advisory Group (TAG) to the IEC, to recommend adoption of US requirements in the IEC Standards. This would require good technical documentation, such as detailed test results, so that the US delegates could credibly defend the proposal to the IEC Technical Committee 61, which covers the scope of UL 982. (NOTE: Mr. John Drengenberg of UL is the US TAG representative to TC 61.)

If more US companies join the TAG, more technical expertise will be available to support the proposals and to push the US agenda. AHAM will provide funding to members to attend the international meetings. Meanwhile, UL will continue to look at harmonizing IEC requirements with UL Standards via the STP. The possible need for a Working Group at some future point to interface with the US TAG for writing proposals to the IEC as a result of the 60335-2-14 harmonization was suggested.

The STP Secretary stated that UL is committed to the idea of harmonizing its Standards for Safety with those of other organizations, such as the IEC, as this would eventually enable UL clients to sell their products more easily in the global marketplace. The harmonization effort could become too unwieldy

and time-consuming if not carefully coordinated, which is why UL chose to identify specific UL Standards to be harmonized as part of a Five-Year Plan. By the end of 2005, UL plans to have published 25 harmonized Standards, including those that are based on the IEC 60335 family.

An STP member commented that component standards should also be harmonized because the end product standards are harmonized and would be referencing a non-harmonized component standard.

The main item on the meeting agenda is the review of a working draft of an IEC-based UL Standard, 60335-2-14, which contains both IEC and UL requirements. An important goal of the harmonization plan is to minimize the number of US deviations in the IEC-based Standards by either removing them outright in favor of the IEC requirement or seeking adoption of the UL requirement in the IEC Standard through their proposal process. An example of the latter will be the UL Basic Safety Principles.

5B. OVERVIEW OF UL'S BASIC SAFETY PRINCIPLES

DISCUSSION

The UL Tech Rep described the first three Basic Safety Principles (BSPs), which concern the UL articulate probe, leakage current limits, and marking requirements. UL considers them to be essential for IEC harmonization as they are designated type D1 national differences in IEC-based UL Standards. To withdraw or modify any of the BSPs from the IEC-based UL Standard would require the approval of the UL Chief Engineer.

An STP member mentioned that symbology is an important part of IEC marking requirements. Symbols could be an alternative method of listing instructions in various languages. Another STP member questioned how important this is since a sizable number of consumers even in the US cannot read the instructions on the box or even comprehend what the symbols mean. The comment was offered that symbols unheard of in the 1960's, like the high voltage decal, are commonly recognized today through years of public exposure and education. The UL Tech Rep offered to take an action item to ask the Chief Engineer what the UL position is on the use of symbols in the marking requirements of the BSPs.

The other four Basic Safety Principles are not yet available. The UL Tech Rep had requested a schedule from the Global Standards department, which is coordinating that effort, and took an action item to promulgate them to the STP and interested observers when they are complete. The STP Secretary agreed to add page numbers to the BSPs for ease of readability.

5C. REVIEW AND DISCUSSION OF UL 982 DEVIATIONS TO IEC 60335-2-14 BASELINE REQUIREMENTS

DISCUSSION

The UL Tech Rep said the responsibility of the STP is to decide what requirements in UL 982 should be retained in the working draft of UL 60335-2-14 as deviations. The primary differences between UL 982 and IEC 60335-2-14 testing are in the areas of maximum food loading, test voltages for heating test, markings, instruction manual, probe, power input, heating, moisture resistance, leakage current, abnormal operation, mechanical hazards, and plastics requirements.

To assist in the discussion, the UL Tech Rep handed out copies of a comparison guide matching up paragraph numbers between UL 982 and IEC 60335-2-14 for a given test or requirement, and results of worse-case testing performed at UL's Research and Development department on various types of appliances. The critical tests performed on most of the appliances were input, heating (normal temperature), electric strength (dielectric withstand), leakage current as received, leakage current after moisture resistance, electric strength after moisture resistance, mechanical strength, abnormal operation, electric strength after abnormal operation, and strain relief.

For ease of comparison, the UL deviations were inserted into the working draft as indented, bolded text immediately following the text of the corresponding IEC requirements. The UL Tech Rep indicated a desire to incorporate the changes contained in the UL 982 revision pages dated November 29, 2001 into the deviations retained in the working draft before completion of the review effort.

An STP member asked if a preliminary harmonization of the deviations was performed as they were inserted into the working draft. The UL Tech Rep said no decision was made about whether each deviation belonged at the time it was identified. The number of deviations were maximized intentionally so that every possible difference between UL 982 and IEC 60335-2-14 could be discussed. UL explained that the object now is to minimize the number of deviations in the IEC-based UL Standard.

An STP member said that UL 982 described the test setup and procedures with much more detail in many instances than IEC 60335-2-14 and asked how UL would classify this type of deviation in the harmonized draft. The UL Tech Rep said this would be a D2 deviation because the test method is different. The majority of deviations in the working draft are considered D2 and would require at least a file review. UL explained there are five types of deviations, or national differences: DR is based on the National Electrical Code (NEC) and other US regulatory requirements. D1 concerns the UL Basic Safety Principles. D2 is a difference in the basic safety practices between UL 982 and IEC Part 60335-2-14. DC involves components only. DE is editorial only (safety not affected).

An STP member thought the metric measurements called out in the IEC document are too precise (i.e., fraction of mm) and suggested a proposal to the IEC to allow rounding up to a more measurable number.

DISPOSITION OF DEVIATIONS AND COMMENTS

The following is a synopsis of the results of the discussion of the UL deviations (and in some cases, the opposing IEC requirements) in the 60335-2-14 working draft during the STP 982 meeting. Due to the large number of deviations contained in the working draft, the STP was not able to complete the review at this meeting but the Working Group will resume in the near future via regularly scheduled telephone conferences to effect timely completion (see item 12).

1DV: Retain 1DV.1.

1.101DV: Retain DV.1 - DV.12.

- 1.101DV.6: 240V being incorporated (per revision pages).

2.2.9DV: DELETE definition, NOTES 1-2-6, and first sentence of NOTE 3. Retain remainder of NOTE 3 and NOTES 4-5.

- STP supported staying with IEC assignments for rated power input in lieu of deviation table (10DV.1.1). Only potential change to products would be in marked input rating for products rated less than 300 watts.
- UL Tech Rep took action item to interpret meaning of "-15% (or -60W if greater...)" in second bullet of NOTE 3 in IEC paragraph 2.2.9 (Replacement).

2.2.9.1DV: [Keep OPEN] Reclassify as D2.

- STP member said 50-80 core sand is difficult to obtain in US for UL test. IEC test is shorter but draws more power. STP members favored further investigation.
- UL Tech Rep took action item to define 'Brabender units' and 'farinograph' in NOTE 3.
- UL Tech Rep took action item to ascertain from what point in time is age of flour measured (i.e., when flour is first produced, when bought, when stored, etc.), in NOTE 2.

2.2.9.2DV: Retain DV.1 to DV.3. Possible candidate proposal for IEC.

2.2.9.4 (IEC): No change required.

- STP asked for editorial distinction between coffee mills and coffee grinders. UL Tech Rep said UL 982 makes none.
- UL Tech Rep took an action item to get interpretation of 'if necessary' in NOTE following 2.2.9.4 (concerning conditioning of coffee beans) and also in NOTE 1 following 2.2.9.5 (concerning conditioning of wheat).

2.2.9.6DV: DELETE DV.1. Retain DV.2 and DV.3.

- STP considered IEC requirement for carrot mixture (soaked in water) in DV.1 to be a more standard load. Capacity load description in DV.2 could be possible candidate proposal to IEC. DV.3 is retained because of NOTE concerning liquid mixers to be inserted in 11.7.6DV.

- STP member thought UL temperature results for blender testing seemed high compared to IEC method and asked if data indicated absolute temperatures or just deltas. UL Tech Rep took action item to inquire.

2.2.9.8DV: DELETE deviation.

2.2.9.10DV: [Keep OPEN]

- UL Tech Rep took action item to ask manufacturers of ice-cream machines to test both methods (IEC and UL).

2.2.9.11DV: Retain as NOTE only.

2.2.9.12DV: DELETE deviation.

2.2.9.13DV: DELETE deviation. Same as 2.2.9.12DV.

2.2.9.14DV: Retain DV.1 and DV.2 (refer to pasta-extruder only). IEC requirement for noodle maker is OK.

2.2.9.17DV: [Keep OPEN]

- STP suggested standardizing carrot load
- UL Tech Rep took action item to look at lab results and to check input

2.2.9.19DV: DELETE deviation. IEC requirement now in UL 982.

- IEC test run for 10 minutes. STP appeared to favor UL method (updated in revision pages dated November 29, 2001) but requested check of test data to be sure. Possible candidate proposal for IEC
- UL Tech Rep took action item to check UL-Listed knife sharpeners that have different types of actions (momentary contact, on-off, etc.).

2.2.9.20 (IEC): No change. IEC requirement now picked up in revision pages dated November 29, 2001.

2.2.9.21DV: DELETE current deviation. Provide explanatory NOTE (which will warrant its own deviation) for application of load.

- IEC does not specify in standard how or where 10 N force is to be applied. Details like this go into Practical Application Guides in European labs which usually vary in content. UL Standard provides much more information.
- Several STP members took action item to question their manufacturing contacts about 10 N.

2.105DV-2.112DV: Retain input load requirements for appliances not mentioned in IEC. Shift entire block to after 2.2.9.21DV and renumber.

2.5.2DV - 2.5.3DV: Retain deviations. Add NOTE to distinguish safety extra low voltage circuit from Class 2 for Level of Evaluation.

2.6.1DV - 2.6.4DV: Retain deviations.

2.6.6DV - 2.6.7DV: Retain deviations. Reclassify as DE.

2.9.10DV: Retain DV.1 - DV.6. Reclassify as DE. Consider shifting to end of Section 2 and renumbering 2.105DV - 2.110DV.

3DV: Retain DV.1 - DV.4. IEC has no similar provisions.

4.2DV - 4.3DV: Retain deviations.

4.14DV: DELETE deviation.

4.101DV: Retain deviation for now

- UL Tech Rep took action item to determine from lab technicians what cloth is called, how it is ordered, and names of suppliers.

6.2DV: Retain deviation.

Entire Section 7 (large number): Retain deviations for now. [Keep OPEN].

- STP formed a separate Working Group (at suggestion of UL Tech Rep) to carefully review all proposed UL markings and to determine which should be retained; see Appendix B for roster.

General discussion of Clause 8 (Protection against access to live parts): STP member asked why deviation to substitute UL test finger should be considered when no safety problems have been noted using IEC test finger operating at much higher voltage (240 V). UL Tech Rep took action item to discuss circumstances in which deviation for UL Basic Safety Principle could be overturned if no advantage for safety can be demonstrated. Alternative would be to try to convince the IEC to change its requirement. If neither side compromises, then products sold worldwide must be designed to handle both probes. Deviating from IEC requirements could be difficult to justify if no safety hazard is posed.

An STP member asked how effective the Working Group would be if review decisions were made at higher echelons within UL. UL Tech Rep replied that, as the voice of UL on this STP, he has the authority to bring an issue that is identified to the attention of whatever level of management is required. UL explained that the purpose of the Working Group is to understand why one requirement should be adopted over another.

8.1DV: Retain DV.1 and DV.2. DELETE DV.3 - DV.7.

- DV.1 is good statement of personal injury.
- STP suggested inserting DV.2 in Part 1. UL Tech Rep took action item to determine what is done in other Part 2 standards.
- STP suggested inserting definition of 'detachable parts' in Part 1 while discussing elimination of DV.7. UL Tech Rep took action item to obtain definition and noted that Part 1 deviations should be kept to a minimum.

8.1.1DV: Retain DV.1 and add 'risk of moving' text from 8.1DV.5 (bullets d & e). DELETE DV.2.

8.1.2DV: DELETE deviation

8.1.3DV: DELETE deviation.

8.1.4DV: Retain as NOTE only. Identify 22.42 as Part 1 clause.

8.1.5DV: DELETE deviation.

8.2DV: DELETE deviation (already covered in 8.1.1DV)

- UL Tech Rep will add NOTE in Section 8 that deletes reference to Class 2 appliances and supports definition of limited power sources in deviation 8.3 in Part 1.

9.101DV: DELETE DV.1 and DV.2. Clause 9 is not applicable.

10DV: Replace DV.1 - DV.4 with NOTE referring back to 2.2.9DV.

General discussion of Clause 11 (Heating): STP member asked if UL tests products at more than 120 V and UL Tech Rep said yes. Household supply voltage may be higher or lower than nominal 120 V. Suggestion was made that manufacturers should check whether their products are rated for 120 V or 127 V and whether results of heating tests for Class A motors deviated above 120 V. STP member favored leaving deviations in. Another member said no retest would be required if this was the case. STP agreed with this position. Another member suggested that temperature limits may also come down as power limits go up.

11.1DV: Retain deviation (including 2 tables). GENERAL NOTE: STP member suggested that group overseeing Part 1 standard could advise on any future changes to Part 1 that may affect deviations assigned to this clause.

11.3DV: Retain DV.1 - DV.7.

11.4DV: DELETE deviation.

11.5DV: Retain deviation.

11.6DV: Retain deviation.

11.7DV: Retain DV.1. Retain DV.2 for now.

11.7.1DV: Retain in place of first paragraph and NOTE 1 of 11.7.1 IEC only.

- STP agreed that UL stair-step test should be retained while using IEC five-minute test. Possible candidate proposal for IEC. However, IEC method of mixing is preferred.

- Rest of IEC requirement in 11.7.1 will remain intact (use dough instead of sand for testing food mixers).

11.7.2DV: Retain DV.1 - DV.3 for now

- For information only: UL Tech Rep took action item to determine if sand used in IEC testing is same as sand used in UL testing, except for units used.

- STP thought consistency of oil and flour represented more realistic load than sand. UL Tech Rep took action item to investigate use of oil-flour mixture in lieu of sand in food processors.

11.7.4 (IEC): No deviation necessary.

11.7.5 (IEC): No deviation necessary.

11.7.6DV: DELETE DV.1 and DV.2. Replace with NOTE.

- NOTE will provide definition of wand-type mixer and state that liquid mixer is considered to be blender when used with liquid only.

11.7.7DV: DELETE deviation.

11.7.8DV: Retain deviation. Loads not defined yet.

11.7.9DV: DELETE deviation. IEC approach is preferred.

11.7.10DV: DELETE deviation.

11.7.11DV: DELETE DV.1. Retain DV.2 and DV.3.

- UL Tech Rep will revise wording of latter two items.

11.7.13DV: [KEEP OPEN] Decide between using carrot load (IEC) or cabbage (UL) for vegetable shredder.

11.7.15DV: DELETE deviation.

11.7.16DV: DELETE deviation. UL requirement now same as IEC.

11.7.17DV: DELETE deviation.

11.8DV: Retain DV.1. DELETE DV.2. UL Tech Rep will add NOTE about Kelvin (K.) degree scale.

11.101DV: Retain DV.1 - DV.7. All are possible candidate proposals for IEC.

- STP member took action item to investigate what desired size and weight of ice cubes should be for ice crusher test in DV.3.

5D. FOURTH EDITION OF IEC 60335-1 AND POSSIBLE CHANGES TO FIRST EDITION OF UL 60335-2-14 TO BE PROPOSED

DISCUSSION

[This discussion was tabled because of a lack of time and will be an agenda item for a future meeting of the STP]

6. INCLUSION OF REQUIREMENTS FOR 240 VOLT PRODUCTS

DISCUSSION

The STP reviewed a group of modified requirements for UL 982 in the meeting agenda dated October 26, 2001 (originally from Item 1 in the Subject 982 proposal bulletin dated February 1, 2001) that will be submitted to the STP for ballot. For comparison purposes and to facilitate review, copies of the February bulletin were provided. Several other requirements from Item 1 in the February bulletin that did not require revision from that review cycle will be incorporated into the Standard when the repropose requirements are approved by the STP.

An STP member requested that the range of voltages given in the proposed Table 18.1 (Minimum spacings at other than supply wiring terminals) be changed to 0 - 130 and 131 - 250 volts to agree with IEC convention. The STP concurred with this change; ref. item 6 in Appendix A. The exception to paragraph 19.1.1 (also being proposed) will make a distinction in grounding requirements between products that operate above 150 V and those that operate at 150 V and below. The question was raised if the use of more than one threshold in the Standard would be regarded as an inconsistency. The UL Tech Rep replied that it would not since the two requirements addressed completely different issues (spacings versus grounding). The word 'output' will be removed from the second column (Rating of motor employed) in Table 18.1 since only motor input is measured.

The STP members discussed voltages in general. (NOTE: Table 22.1 (Test voltages) was proposed in the February bulletin as a new insertion in UL 982 and was reviewed without comment during that ballot cycle.) Although not part of the proposals to be reviewed in the agenda, an STP member asked how a product would be tested if its rated voltage was outside the ranges given in the table. The UL Tech Rep agreed to take an action item to check whether such direction was already in the Standard (either in the body of the requirements to be repropose or in the revision pages dated November 29, 2001). If found not to be there, the UL Tech Rep will propose a new NOTE for Table 22.1, which states that a product will be tested at its rated voltage but not less than 120 V if its voltage rating is outside the given ranges; ref. item 6 in Appendix A. The UL Tech Rep also stated that all products are tested at a 60 Hz frequency in UL 982.

The STP members examined the distinction assigned to various locations, as proposed in 4.8.1, depending on the amount of moisture present and protection from outdoor conditions, since some household food-preparing products designed for indoor use may be temporarily used on an open-air porch or in a backyard, for instance, where exposure to weather is a possibility. The group determined that no additional impact on testing should exist when these definitions are put into effect.

The UL Tech Rep and several STP members determined from an electrical standpoint that a permanent installation is hardwired whereas a fixed installation is essentially an enclosure connected to the wall.

No objections were raised to proceeding with the anticipated changes to this group of requirements.

7. REVISION TO REQUIREMENTS TO FLOODING OF LIVE PARTS

DISCUSSION

The next item discussed from the group of modified proposals in the meeting agenda dated October 26, 2001 was originally from Item 4 in the Subject 982 proposal bulletin dated February 1, 2001.

The UL Tech Rep said the proposed test for flooding (Section 42A) was originally located in the Personal Injury area of the Standard but was moved to Performance because the perception is that it really is a performance test. The new Performance tests (42B-42C-42D) will add requirements for a thorough check of seals and gaskets used in these appliances, including thermal conditioning, tensile strength and elongation. The STP members acknowledged these improvements to the procedures.

The UL Tech Rep said that the last two sentences in paragraphs 42A.1 and 42A.2 were proposed in the February bulletin and will strengthen the test by checking leakage current during (rather than after) the five-minute splash conditioning. In addition the dielectric voltage-withstand test is to be performed after the conditioning.

The STP discussed how to improve the effect of the splashing in 42A.1. One suggestion was to overfill the containers of three representative appliances and test consecutively. Another, which the STP considered to be more realistic, was to run just one appliance a total of three times in succession while the water splashed out and refilling the container in between runs. This would also facilitate monitoring of leakage current. The UL Tech Rep took an action item to propose a revision to 42A.1 reflecting this change; ref. item 7 in Appendix A.

Paragraph 42A.3, which was intended to simulate a flooding condition due to deterioration of a seal or gasket, was originally added to Section 42A in the February bulletin. It was then taken out of this group of modified requirements for the meeting agenda because it was thought to be redundant with the new Sections 42B and 42C. An STP member wanted to have the option to rerun the flooding test and to simulate other abnormal conditions with the gasket removed or even parts removed from the appliance, in lieu of performing the reliability checks in the new sections. The UL Tech Rep agreed with reinstating the intent of 42A.3 as a special case and took an action item to propose a revision to the reliability test in Section 42C. The text of the former 42A.3 will become the new 42C.5 that would act as a conditioning test to a new exception to be added to 42C.1; ref. item 7 in Appendix A.

No objections were raised to proceeding with the anticipated changes to this group of requirements.

8. REVISION OF REQUIREMENTS FOR RUNNING-BURNOUT CONDITIONING TEST

DISCUSSION

The next item discussed from the group of modified proposals in the meeting agenda was originally from Item 11 in the Subject 982 proposal bulletin dated February 1, 2001.

The UL Tech Rep said that the latest revisions to the running-burnout test described in paragraph 42.4.2 were patterned after a similar test for vacuum cleaners. In the opinion of the STP, the revised test represents a systematic and realistic approach for determining the burnout point of the motor in an appliance and is a definite improvement from what is currently in the Standard. No further changes were recommended to this group of requirements.

Ref. item 8 in Appendix A for text of proposals.

9. REVISION OF REQUIREMENTS FOR BLENDERS

DISCUSSION

The next item discussed from the group of modified proposals in the meeting agenda was originally from Item 19 in the Subject 982 proposal bulletin dated February 1, 2001.

The two areas of concern are the splashing of hot liquids through an opening in the top cover of the blender, and venting of the container when blending hot liquids. Several STP members took issue with the requirements in paragraph 21.9.4.3, which stated that the top cover shall have an opening in the center (if unit has just one opening) and that the opening shall have a dimension of at least one inch. One member inquired about being able to obtain a UL Listing for an appliance that did not have a center opening in the cover. Their preference is to go back to allowing the single opening on the side.

Since the side opening on many models in the marketplace is used for pouring liquids out rather than pouring them in, a cap is typically provided for closing the side opening to prevent the liquid from getting out. Although probably not many consumers use their blenders to mix hot liquids, the protection should still be provided. The UL Tech Rep did not know of any field reports to date involving a blender with a side opening in the cover and agreed that the pouring cap should be closed in such instances. An STP member recommended modifying paragraph 44.3.2h to specify that the side caps be closed to prevent splashing.

An STP member stated that the caps for closing the opening(s) in the cover are not airtight, which could offer some relief in an appliance that has a cover with a single opening. Another member said that the center opening (on a two-hole cover) should be used only for pressure relief and suggested specifying a quarter-inch opening (in lieu of one inch) for the center. A discussion ensued about how to devise a performance test for evaluating cap designs but no conclusions were reached.

The UL Tech Rep took an action item to formulate new wording for both requirements that would address the STP concerns. Several STP members offered their assistance in this effort. The updated requirements will be forwarded to the STP membership in the near future in a separate proposal bulletin from this meeting report. (UPDATE: Clause 44.3.2h was in fact updated in response to an earlier review comment from an STP member but was inadvertently left out of the item in the meeting agenda. What the STP saw was the previous text from the February bulletin. The correct text will be included in the revised proposal.)

10. ADDITION OF REQUIREMENTS FOR APPLIANCES EMPLOYING AN AUTO-PULSE FUNCTION SWITCH

DISCUSSION

The next item discussed from the group of modified proposals in the meeting agenda was originally from Item 20 in the Subject 982 proposal bulletin dated February 1, 2001.

The auto-pulse requirement in paragraph 21.7.11 typically applies to blenders. An STP member said putting a heavy enough load in the container of the appliance would probably be sufficient to keep the blades from turning again during an auto-pulse condition but that alone should not be relied upon. The STP member stated that the nominal five or six second window when the blades are not moving (during auto-pulse) should be somewhat shorter. A visual identification of whether the appliance is ON is required.

The UL Tech Rep pointed out paragraph 21.3.4 of the revision pages dated November 29, 2001 added a requirement that will address this issue. Paragraph 21.3.4 states that an appliance which has exposed moving parts and can enter a motor-stop condition while still energized (switch not in OFF position) shall indicate this condition by means of a flashing red light. An STP member called out paragraph 21.7.3, which states that the operator should be able to determine whether an appliance is in the OFF position just by looking at the main switch (except for momentary contact). The UL Tech Rep asked if the red light meets the intent of the requirement in 21.7.3 and the STP members expressed the opinion that it did. Some appliances with a membrane touch pad use a pilot light for this purpose, which the STP considered acceptable as a visual indication. A possible exception would apply for an appliance with a touch pad that did not have a flashing red indicator.

An STP member requested that a second exception be added to 21.7.11 to account for appliances that offer an auto-pulse mode but do not have a red light to indicate it. For appliances that have a mechanical switch but no red light during an auto-pulse, the depressed or thrown switch shall serve as the indication that the unit is still powered on and could restart at any time. The UL Tech Rep agreed with this suggestion and took an action item to propose the exception; ref. item 10 in Appendix A.

The UL Tech Rep asked the STP members what the desired flashing rate should be but no preference was stated. The UL Tech Rep later inquired whether the auto-pulse makes the light go out before restart or whether the light will stay on. Several STP members thought that it probably stays on. The UL Tech Rep then asked all of the producers present, as a group action item, to verify if this has happened with any of their products and to ascertain the approximate rate of the auto-pulses.

No objections were raised to proceeding with this change to the requirement.

11. APPLICABILITY OF FLAMMABILITY REQUIREMENTS FOR POLYMERIC ENCLOSURES IN UL 746C, TO UL 982

DISCUSSION

The UL Tech Rep asked the STP members whether the requirements in UL 982 or UL 746C should be used for testing the flammability of polymeric enclosures in portable products. Some products previously defined as 'attended' in 746C are now considered 'unattended' which determines the requirements. An exception in 746C concerning the thickness of plastic exposed to current-carrying parts is also no longer available. Some Standards contain requirements for plastics while others defer to 746C.

One STP member favored using UL 746C as the baseline and giving the end-product manufacturers (and their component suppliers) a long enough lead time to ensure compliance before the requirement takes effect. The comment was offered that every STP concerning subjects that use internal plastic housings will eventually face this decision. Another member asked which Standard had more stringent requirements, UL 982 or 746C. Another member thought 746C was more stringent in certain cases. However, 982 requires tests that 746C does not. The suggestion was made that every member of this STP consult with their own risk management experts to determine a suitable course of action.

The UL Tech Rep wanted to focus on the working draft of UL 60335-2-14, rather than UL 982, for possible changes, which introduced a slightly different issue (UL or IEC). An STP member thought that the UL requirement, regardless of which Standard is followed, would remain a deviation from the IEC 60335-2-14 because the IEC plastic requirements are considered very difficult to achieve. The UL Tech Rep said the problem is on the component level. It was explained that UL has attempted to provide a viable set of guidelines for the end-product manufacturers in UL 746C and this should be kept in mind.

The STP made no recommendation for changes to either the working draft or UL 982 at this time.

12. FUTURE MEETING SCHEDULE

In the interest of saving time and travel expense associated with another face-to-face meeting at some future date, the STP agreed to continue the harmonization review of the working UL 60335-2-14 draft via a two hour teleconference starting at 10:00 AM on Tuesday, December 11, 2001. The STP member from AHAM offered the use of their call-in bridge to coordinate all of the other callers. The STP members and observers who participated in the discussions of the working 2-14 draft at the November 28-29, 2001 meeting now comprise the Teleconference Working Group (see Appendix B for roster). The ongoing review of this document will be the sole agenda item. The STP anticipates having several such teleconferences.

13. MISCELLANEOUS

UL has introduced a new proposal at the suggestion of an STP member during the December 11, 2001 teleconference; ref. item 13 in Appendix A for details and proposed changes.

Unless specifically requested to do so, UL will not acknowledge comments indicating concurrence with these proposals.

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APPENDIX A**PROPOSED REQUIREMENTS FOR THE FOURTH EDITION OF THE STANDARD FOR MOTOR-OPERATED HOUSEHOLD FOOD PREPARING EQUIPMENT, UL 982**

For your convenience in review, proposed additions to existing requirements are shown underlined and proposed deletions are shown lined-out. Proposed new requirements are identified by (NEW). In the case of extensively revised paragraphs, the original text is identified by (CURRENT) and is lined-out, followed by the proposed text identified by (PROPOSED). A paragraph that is proposed to be deleted is identified by (DELETED) and is shown lined-out.

6. INCLUSION OF REQUIREMENTS FOR 240 VOLT PRODUCTS**RATIONALE**

The Standard for Motor-Operated Household Food Preparing Machines, UL 982, presently covers appliances rated at a nominal 120 V. UL's Subject 982 bulletin dated February 1, 2001 had proposed to add requirements to evaluate 240 Volt products. As locations were referenced in the proposed revisions, UL had also proposed to add definitions of damp, dry, and wet locations to the Standard. Further, during the course of developing the proposed requirements for minimum spacings at other than supply wiring terminals for 240 Volt products in Table 18.1, the expression "output" was inadvertently added in reference to power. After consideration of comments received in response to the bulletin, UL has revised the proposal to clarify the definition of "LOCATION," as meaning where the appliance is to be used or stored. In addition, UL has revised Table 18.1 to remove the expression "output" in reference to power and 23.7 strictly for editorial clarification.

After further review at the November 28-29, 2001 meeting of STP 982, the STP decided to slightly modify the voltage ranges in Table 18.1 to be in accordance with the ranges used in IEC standards. Occasionally, UL may test an appliance in this subject that has a voltage rating outside the nominal 110-120 V and 220-240 V ranges. At the suggestion of the STP, UL will add a NOTE to Table 22.1 stating that in such a case the appliance will be tested to whatever its given rating is but not below 120 V.

For ease of review, for this item, UL has shown only the paragraphs and tables that are being repropose with this bulletin, rather than the entire item as previously proposed in UL's bulletin dated February 1, 2001. Although no further revisions to paragraph 19.1.1 were introduced at the meeting, it is included here for ease of review of paragraph 4.8.1, and review and ballot by STP members.

PROPOSALS**4.8.1 LOCATION:**

- a) DAMP LOCATION - Partially protected ~~location~~ place or area where the appliance is either used or stored under canopies, marquees, roofed open porches, and like locations, and interior locations subject to moderate degrees of moisture, such as some basements, barns, and cold-storage warehouses.

b) **DRY LOCATION** - A location place or area where the appliance is either used or stored not normally subject to dampness or wetness. A location temporarily subject to dampness or wetness, as in the case of a building under construction, is included in this category.

c) **WET LOCATION** - A location place or area where the appliance is either used or stored exposed to weather and unprotected.

(CURRENT)

Table 18.1
Spacings at other than wiring terminals

Parts involved ^b	Minimum spacings in inches (mm)
	Over surface or through air
Commutator of a motor	1/16 (1.6)
Elsewhere in the appliance	3/32 ^a (2.4 ^a)
^a For a motor rated at 1/3 hp or less, these spacings may not be less than 1/16 inch (1.6 mm).	
^b Magnet wire is considered to be an uninsulated live part.	

(PROPOSED)

Table 18.1
Minimum spacings at other than supply wiring terminals

Potential involved, volts	Rating of motor employed [Motor diameter 7 inches (178 mm) or less ^a]	Minimum Spacings	
		Over surface inch (mm)	Through air, inch, (mm)
0 – 425 130	1/3 horsepower (250 W output) or less	1/16 (1.6)	1/16 (1.6)
	More than 1/3 horsepower	3/32 (2.4)	3/32 (2.4)
425 131 – 250	All motors	3/32 (2.4)	3/32 (2.4)
NOTE – Film-coated wire is considered to be an uninsulated live part.			
^a This is the diameter, measured in the plane of laminations of the circle circumscribing the stator frame, excluding lugs, fins, boxes, and similar parts used solely for motor mounting, cooling, assembly, or connection.			

19 Grounding

19.1 Required grounding

(CURRENT)

19.1.1 A cord-connected appliance intended for outdoor use and a permanently connected appliance shall have provision for grounding.

(PROPOSED)

19.1.1 The following types of appliances shall have provision for grounding:

- a) An appliance for use in damp or wet locations (see 4.8.1),
- b) An appliance intended for outdoor use,
- c) An appliance intended to be used on a circuit operating at more than 150 V to ground, and
- d) An appliance intended for permanent connection to the supply source.

Exception: An appliance intended to operate at a nominal potential of 240 V and any other potential greater than 150 V is to be provided with means for grounding in accordance with 19.2.2, unless the marked rating on the appliance is 120/240 V and the appliance is wired for a nominal 120 V connection, or the appliance is otherwise marked to indicate that it is to be connected to a circuit operating at 150 V or less to ground.

(NEW)

Table 22.1
Test voltages

Rated voltage (V)	Test voltage (V)
110 - 120	120
220 - 240	240

NOTE: If the rated voltage is not within the given ranges, the appliance is to be tested at its rated voltage but not less than 120 V.

23.7 Normally a ~~sample~~ representative appliance will be carried through the complete leakage-current-test program as covered by 23.6, without interruption for other tests. With the concurrence of those concerned, it is possible to interrupt the leakage-current tests ~~may be interrupted~~ for the purpose of conducting other non-destructive tests.

7. REVISION TO REQUIREMENTS FOR FLOODING OF LIVE PARTS

RATIONALE

UL had determined that a counter-top machine provided with a container into which liquid is intended to be added by the user should be tested to determine if the deterioration of the liquid container's bottom seal, the motor shaft seal of the machine, or both, would result in the entrance of liquid into the electrical or motor enclosure of the machine, as this situation may also result in an increased risk of fire or electric shock. UL's proposal bulletin (dated February 1, 2001) accordingly proposed to revise paragraph 20.1 to address this concern, and, in addition, UL had proposed to require that the malfunction of a timer switch or of a float- or pressure-operated switch, or the deterioration or damage of a boot or diaphragm of rubber or similar material, not cause flooding of the electrical components of a machine. To determine compliance with this requirement, UL proposed the Test for Deterioration of Parts Subject to Flexing as Section 42B, the Test for Parts Not Subject to Flexing as Section 42C, and the Insulation Resistance Test as Section 42D.

In response to comments received in response to the bulletin, UL had planned to propose the elimination of paragraph 42.A3 as it was considered no longer applicable with the insertion of the new requirements described in Sections 42B and 42C. However, at the November 28-29, 2001 meeting of STP 982, the STP decided to retain the option to simulate a severe flooding condition by removing seals and gaskets from the liquid container and the motor shaft. The STP also determined that the conditioning described in 42A.3 qualifies as an exception to the reliability requirements in paragraph 42C.1, and UL has revised the proposal accordingly. Further, the STP agreed that the flooding test in paragraph 42A.1 would represent more realistic conditions if it was performed on the same appliance three times in succession by filling the container, allowing the solution to splash out with the appliance running, and stopping only to refill the container when the splashing stopped (in lieu of running for five minutes while filling the container continuously). UL has revised the proposal accordingly.

Prior to the STP meeting, UL had decided to combine the failure conditions (malfunction of a timer switch or of a float- or pressure-operated switch, deterioration or damage of a boot or diaphragm, and failure of a seal or gasket) and compliance tests (Sections 42B, 42C, and 42D) shown in paragraph 20.5 with similar requirements in 20.1. UL has revised the proposal to show the combined requirement in 20.1 and to delete 20.5, which was originally proposed as a new paragraph in the February bulletin. For ease of review of the revised 20.1, the text of the deleted 20.5 will be shown with the strikethroughs. No further changes were introduced at the STP meeting.

PROPOSALS

20.1 ~~The design of a A counter-top appliance shall preclude the drawing of liquids into the appliance following actions if when such action would result in risk of fire or electric shock. Compliance shall be determined by the Flooding of Live Parts Tests, Section 42A, the Test for Deterioration of Parts Subject to Flexing, Section 42B, and the Test for Reliability of Parts Not Subject to Flexing, Section 42C, and the Insulation Resistance Test, Section 42D:~~

- a) Overflow of liquids into the electrical or motor enclosure of the appliance (42A.1).
- b) Drawing of liquids into the electrical or motor enclosure of the appliance (42A.2), and
- c) Malfunction of a timer switch or of a float- or pressure-operated switch, deterioration or damage of a boot or diaphragm, or the deterioration and reliability of seals and gaskets, resulting in the entrance of liquid into the electrical or motor enclosure of the appliance (Sections 42B, and 42C, and 42D).

(RELOCATED)

20.2 ~~To determine if a counter-top appliance complies with 20.1, the appliance is to be placed in a smooth-bottomed shallow pan having at least twice the length and width of the bottom of the appliance being tested. The pan is to be filled to a depth of 1/16 inch (1.6 mm) with a salt-water solution (1/2 gram of NaCl per liter of distilled water), and the appliance operated at maximum speed for 1 minute. Following this, the appliance is to comply with leakage current measurement and dielectric voltage withstand test requirements. See also 22.3:~~

20.2 Relocated as 42A.2**(RELOCATED)**

~~20.3 To determine if a counter-top appliance that is provided with an open-top type container into which liquid is intended to be added by the user complies with 20.1 with respect to overflow, the appliance is to be positioned as intended for normal use, cover on but fill hole open. The liquid container of the appliance is to be completely filled with a salt water solution (see 20.2) and a further quantity equal to 15 percent of the capacity of the container is poured in steadily over a period of 1 minute. If the appliance is so designed that a liquid container is situated over the motor, the spillage test is made with the appliance switched off or in operation whichever imposes the more severe condition. If the liquid container is not situated over the motor, the appliance is operated for 5 minutes at a maximum speed setting, the container being kept filled with the test solution to a level such that the greatest amount of splashing occurs. The results are considered to be acceptable if, after this conditioning, the appliance complies with the Leakage Current Test, Section 23, and the Dielectric Voltage-Withstand Test, Section 28. Also see 22.3.~~

20.3 Relocated as 42A.1**(UNCHANGED)**

20.4 If the failure of a liquid container provided as a part of an appliance would result in a risk of fire or electric shock, the container shall be of a material which is compatible with the liquid intended to be used therein.

(NEW)

~~20.5 The malfunction of a timer switch or of a float or pressure-operated switch, the deterioration or damage of a boot or diaphragm, or the failure of a seal or gasket shall not cause flooding of the electrical components of a machine that employs water or other electrically conductive liquid in its operation. Compliance shall be determined by the Test for Deterioration of Parts Subject to Flexing, Section 42B, the Test for Reliability of Parts Not Subject to Flexing, Section 42C, and the Insulation Resistance Test, Section 42D, as applicable.~~

(NEW)**42A Flooding of Live Parts Tests**

42A.1 To determine if a counter-top appliance that is provided with a container into which liquid is intended to be added by the user complies with 20.1(a) with respect to overflow, the appliance is to be positioned as intended for normal use, cover on but fill-hole or fill-holes open. The liquid container of the appliance is to be completely filled with a salt-water solution (1/2 gram of NaCl per liter of distilled water) and a further quantity equal to 15 percent of the capacity of the container is poured in steadily over a period of 1 minute. When the appliance is so designed that a liquid container is situated over the motor, the spillage test is made with the appliance switched off or in operation, whichever imposes the more severe condition. When the liquid container is not situated over the motor, the appliance is operated for 5 minutes at a maximum speed setting, the container being kept filled with the test solution to a level such that the greatest amount of splashing occurs. three times in the following manner: the liquid container is filled with the test solution, and the appliance is operated at the maximum speed setting until there is no more splashing. In between operations, the appliance is to be turned off and the liquid container re-filled with the test solution. During this conditioning, the appliance shall comply with the Leakage Current Test, Section 23. After this conditioning, the appliance shall comply with the Dielectric Voltage-Withstand Test, Section 28. See also 22.3.

42A.2 To determine if a counter-top appliance complies with 20.1(b) with respect to the drawing of liquids into the enclosure, the appliance is to be placed in a smooth bottomed shallow pan having at least twice the length and width of the bottom of the appliance being tested. The pan is to be filled to a depth of 1/16 inch (1.6 mm) with a salt-water solution (1/2 gram of NaCl per liter of distilled water), and the appliance operated at maximum speed for 1 minute. During this conditioning, the appliance shall comply with the Leakage Current Test, Section 23. Following this conditioning, the appliance shall comply with the Dielectric Voltage-Withstand Test, Section 28. See also 22.3.

Exception: A counter-top machine employing bottom vents and legs which space the vents more than 2 inches (50.8 mm) above the counter top is not required to be tested.

(NEW)

42B Test for Deterioration of Parts Subject to Flexing

42B.1 The deterioration of a part made of rubber, plastic, or a similar material, which is subject to flexing shall not result in a risk of electric shock when subjected to the test described in 42B.2.

Exception: Infrequent motion of small amplitude, such as that encountered during normal operation of a diaphragm covering a pressure-operated switch, is not determined to constitute flexing as far as these requirements are concerned.

42B.2 To determine whether an appliance complies with 42B.1, the part subject to flexing is to be completely removed to simulate its deterioration and the appliance operated through one complete cycle of normal operation, and then subjected to the Flooding Test described in 42A.1. The appliance is then to be tested as follows:

- a) A cord-connected appliance shall comply with the Leakage Current Test, Section 23, and the Dielectric Voltage-Withstand Test, Section 28.
- b) A permanently-connected appliance shall comply with the Insulation Resistance Test, Section 42D, and the Dielectric Voltage-Withstand Test, Section 28.

(NEW)

42C Test for Reliability of Parts Not Subject to Flexing

42C.1 After the conditioning described in 42C.2, a polymeric or elastomeric material used for a gasket, diaphragm, seal, or similar part, or a rubber part subject to hot soapy water during cleaning shall have a tensile strength of not less than 75 percent and elongation of not less than 60 percent of the values determined before conditioning. At the conclusion of the tests, there shall not be visible deterioration, deformation, melting, or cracking of the material and the material shall not harden as determined by normal hand flexing.

Exception No. 1: A material that has been investigated in accordance with 42C.4 is not prohibited from having physical properties other than those specified.

Exception No. 2: A noncomposite material that has been found to comply with the requirements in the Standard for Gaskets and Seals, UL 157, and that complies with the minimum acceptable elongation and tensile strength after aging is determined to be in compliance with these requirements.

Exception No. 3: A material or construction that has been investigated in accordance with 42.C5 is not prohibited from having physical properties other than those specified.

42C.2 A total of 20 pieces of each representative material is required for this test. Five pieces are to be tested for elongation in the as-received condition and 5 pieces are to be tested for tensile strength in the as-received condition. The 10 remaining pieces are to be placed in a circulating-air oven at a temperature of 69 - 70°C (156 - 158°F) for 168 hours. Five of the conditioned pieces are to be tested for elongation and the other 5 pieces are to be tested for tensile strength. The test methods and apparatus are described in the Standard for Test Methods for Rubber Properties in Tension, ASTM D412.

42C.3 A gasket of material other than mentioned in 42C.1, such as bonded cork or impregnated fiber, that is not known to be reliable, shall be investigated for equivalent resistance to aging and temperature. Absorptive materials, such as cork or fiber shall not be used where they contact a live part.

42C.4 To determine compliance with Exception No. 1 to 42C.1, a gasket, a diaphragm, or a seal of a counter-top appliance is to be oven conditioned as specified in 42C.2. After the oven conditioning, instead of the tensile and elongation testing, the gasket, diaphragm, or seal is then to be installed in the associated counter-top appliance and subjected to the Flooding of Live Parts Tests described in 42A.1 and 42A.2. As an alternate test method, entire representative appliances are to be subjected to the accelerated-aging conditionings. When an entire appliance is subjected to the accelerated-aging test, the diaphragm or seal temperature shall be monitored and maintained at the oven temperature value indicated in 42C.2. The entire appliance is then to be subjected to the Flooding of Live Parts Tests described in 42A.1 and 42A.2.

42C.5 To determine compliance with Exception No. 3 to 42C.1, one representative appliance is to be tested. The liquid container's bottom seals and the motor shaft seal of the appliance are to be removed one at a time. The liquid container is then to be completely filled with a salt-water solution (1/2 gram of NaCl per liter of distilled water) while on the base of the appliance as in normal use. The test is to be conducted with the appliance either switched off or in operation, whichever imposes the more severe condition. During this conditioning, the appliance shall comply with the Leakage Current Test, Section 23. Following this conditioning, the appliance shall comply with the Dielectric Voltage-Withstand Test, Section 28.

(NEW)

42D Insulation Resistance Test

42D.1 Following the Test for Deterioration of Parts Subject to Flexing, Section 42B, a permanently-connected appliance shall have an insulation resistance of at least 50,000 ohms between current-carrying parts and noncurrent-carrying parts.

42D.2 Insulation resistance is to be measured by applying a direct-current potential of 250 volts between live parts and the enclosure and other exposed dead metal parts, using two voltmeters - one voltmeter being connected across the supply line and the other connected in series with one of the leads to the appliance being tested. Designating the reading of the line voltage as V_1 , the reading of the other voltmeter as V_2 , and the resistance of V_2 as R , the insulation resistance is to be calculated by the formula:

$$\text{Insulation Resistance} = \frac{(V_1 - V_2)R}{V_2}$$

8. REVISION OF REQUIREMENTS FOR RUNNING-BURNOUT CONDITIONING TEST

RATIONALE

UL's Subject 982 bulletin (dated February 1, 2001) had proposed an Exception to paragraph 42.4.2 to document present practice which permits the Running-Burnout Conditioning Test to be conducted on the motor itself rather than on the entire appliance, as the construction of some appliances prohibits the appliance motor from being properly loaded to achieve burnout, thus preventing the test from being properly conducted on the entire appliance. UL had further proposed to revise 42.4.2 to document present practice which requires the representative appliances to be loaded to achieve burnout at different intervals to stress the motor insulation differently in the Running-Burnout Conditioning Test. After further consideration, and with the intent of providing a test method that is both repeatable and reproducible, UL has determined to specify the incremental loading requirements to be applied to the appliances or motors. In addition, after consideration of comments received in response to the bulletin, UL has decided to clarify the requirements in 42.4.2 to indicate that the intent of the requirement is met when the motor of any of the representative appliances under test burns out in less than 1 hour of a no-load condition, and has revised the proposal accordingly. Although no further revisions to paragraph 42.4.1 were introduced at the meeting, it is included here for ease of review and ballot by STP members. No further changes were recommended for this item after review at the November 28-29, 2001 meeting of STP 982.

PROPOSALS

42.4 Running-burnout conditioning

42.4.1 A thermoplastic coil form or thermoplastic insulating material employed in a motor with a stalled-rotor current greater than twice the normal operating current shall comply with all of the following after the running-burnout conditioning described in 42.4.2:

- a) The 3-ampere fuse described in 42.4.2 shall remain intact during the test.
- b) The thermoplastic insulating material shall show no appreciable softening or melting to affect spacing.
- c) Any molten metal or flaming shall be confined within the enclosure of electrical equipment within which the motor is used.

Exception: This test need not be conducted if burnout of the motor does not occur as described in 42.3.2(a) during the abnormal conditioning (stalled-rotor test) described in 42.3.2 Section 42.3.

42.4.2 Three representative appliances are to be subjected to this test. Each motor appliance is to be run without a load for 1 hour, immediately followed by operation at normal load for 1 hour, and is then to be loaded mechanically to cause burnout in no more than 8 hours. The dead metal parts of the motor are to be connected to one side of the line through a 3-ampere non-time delay fuse. Immediately following this, the load is to be increased in steps of 10 percent of the rated current for each of four successive 1-hour periods, followed by two 1/2-hour periods, followed by eight 1/4-hour periods, followed by such additional periods of 5 minutes until the motor burns out. During the test, noncurrent-carrying metal parts of the motor that are insulated by the material under test are to be connected to ground through a 3-ampere, quick-acting fuse.

Exception No. 1: A motor which burns out in less than 1 hour of a no-load condition meets the intent of the requirement.

Exception No. 2: The test is not prohibited from being conducted on the motor itself when the construction of the appliance is such that the appliance motor is unable to be loaded to achieve burnout.

9. REVISION OF REQUIREMENTS FOR BLENDERS

The updated proposal will be forwarded to the STP in a separate proposal bulletin from this meeting report.

10. ADDITION OF REQUIREMENTS FOR APPLIANCES EMPLOYING AN AUTO PULSE FUNCTION SWITCH

RATIONALE

It had come to UL's attention that when the ice pulse function in some blenders so equipped is actuated, the blades will come to a complete stop for up to 5 or 6 seconds before they begin rotating again. This type of situation presents a risk of personal injury as the user may mistakenly think the appliance is in the OFF position during this period of time when the blades have stopped rotating. UL's Subject 982 bulletin (dated February 1, 2001) had proposed that the blades on an appliance supplied with an auto pulse function do not fully stop rotating between pulses, and that the blades shall fully stop rotating only when the appliance switch is in the OFF position, and had proposed revisions to 21.7.11 accordingly. After consideration of comments received in response to the bulletin, UL has revised the proposal to add an Exception to allow that the time between pulses to be a maximum of one second.

At the November 28-29, 2001 meeting of STP 982, a new requirement in UL 982 just released in the revision pages dated November 29, 2001 was mentioned during discussion. Paragraph 21.3.4 states an appliance with exposed moving parts that enters a motor-stop condition while the appliance is still energized shall indicate this "ready-to-operate" condition by means of a red flashing light. Some appliances may not have a red light to indicate an auto-pulse condition or, if a membrane keypad is employed, the user may be unable to verify an ON condition by visual inspection of a mechanical ON/OFF switch. The STP reached agreement that a second exception covering these cases should be added to 21.7.11, and UL revised the proposal accordingly.

PROPOSALS

(NEW)

21.7.11 An appliance employing a switch with an auto-pulse function (such as an ice pulse function on a blender) shall be constructed so that the blades do not fully stop rotating between pulses. The blades shall fully stop rotating only when the appliance switch is in the OFF position.

Exception No. 1: An appliance employing a switch with an auto-pulse function meets the intent of the requirement when the time between pulses is a maximum of one second.

Exception No. 2: An appliance employing a switch with an auto-pulse function meets the intent of the requirement if, when the auto-pulse function is activated, a visual indication is employed to notify the user, such as a light, or a depressed button that activates a mechanical switch.

13. EDITORIAL CLARIFICATION FOR KNIFE SHARPENERS**RATIONALE**

UL updated paragraphs 7.6 and 30.3 in the UL 982 revision pages dated November 29, 2001 to require that combination appliances having a knife-sharpening function with a built-in mechanical sharpening block for static knife sharpening be subject to the conditioning requirements of 30.3 - 30.5, when the sharpening area is open to the motor compartment. During an STP 982 teleconference on December 11, 2001 to discuss harmonization of UL 982 with IEC 60335-2-14, an STP member noted the revised 7.6 did not mention specifically when this conditioning should be conducted for static-type knife sharpeners. UL agreed to propose a revision to 7.6 as an editorial clarification. (NOTE: Although not discussed at the November 28-29, 2001 meeting of STP 982, this proposal will be submitted for ballot as part of the meeting report.)

PROPOSALS

7.6 The construction of an enclosure of a knife-sharpener (or a combination appliance having a knife-sharpening function, including an appliance provided with a mechanical sharpening block that is open to the motor or electrical compartment) shall preclude the drawing-in of filings developed during the sharpening function if such would result in a risk of fire or electric shock. See 30.3 – 30.5.

APPENDIX B**STP WORKING GROUPS****1. Juice Extractor WORKING GROUP**

Objective: Determine what actions are needed or, what additional tests should be conducted on juice extractors to allow detection of reported safety problem. Determine where new requirements should be added to UL Standard.

Darrin Conlon, UL Tech Rep, Chairman
Vince Amodeo, CPSC
Matt Carley, Hamilton Beach/Proctor-Silex
Randy Hill, KitchenAid/Whirlpool
Joe Kata, Norelco
Bill Mulligan, Applica
Wayne Morris, AHAM

2. Marking Requirements WORKING GROUP

Objective: Compare markings and instructions contained in Section 7 of IEC 60335-1 (Part 1), and instructions contained in 7.1 of IEC 60335-2-14 (Part 2), with UL markings and instructions from UL 982 inserted as deviations in Section 7 of working 60335-2-14 draft. Determine which markings and instructions should be retained in harmonized UL 60335-2-14 Standard.

Darrin Conlon, UL Tech Rep, Chairman
Matt Carley, Hamilton Beach/Proctor-Silex
Randy Hill, KitchenAid/Whirlpool
Joe Kata, Norelco
Larry Levine, Creative Services
Bill Mulligan, Applica

3. Teleconference WORKING GROUP

Objective: Continue review of working 60335-2-14 draft (started at November 28-29, 2001 meeting) via periodic teleconferences until group has completed its review of this document.

Darrin Conlon, UL Tech Rep, Chairman
Matt Carley, Hamilton Beach/Proctor-Silex
Jeremiah Cassel, UL-Camas
Larry Johnson, National Presto
Randy Hill, KitchenAid/Whirlpool
Randall Hoover, Rival/The Holmes Group
Joe Kata, Norelco
Larry Levine, Creative Services
Wayne Morris, AHAM
Bill Mulligan, Applica
Gerry Schmidt, Metal Ware
Laura Schroepel, STP 982 Chairman
Dave Wester, STP 982 Secretary

APPENDIX C**IMPACT STATEMENT(S) AND PROPOSED EFFECTIVE DATE(S)**

Standard Number	Paragraphs, Tables, Figures, or Section Number	Impact	Proposed Effective Date
UL 982	4.8.1, 23.7	6	Date of publication
UL 982	Table 18.1, Table 22.1	6	December 1, 2004
UL 982	20.2, 20.3	7	Date of publication
UL 982	20.1; Sections 42A, 42B, 42C, 42D	7	December 1, 2004
UL 982	42.4.1, 42.4.2	8	Date of publication
UL 982	21.7.11	10	Date of publication
UL 982	7.6	13	Date of publication

Impact Statements**Impact 6**

Adoption of some of the requirements in this proposal would require a review and possible retest of presently Listed appliances that are rated at greater than a nominal 120 V to determine compliance with the new requirements for 240 V products. The 4.8.1 and 23.7 requirements were editorial clarifications only and will not affect the aforementioned efforts.

Impact 7

Adoption of some of the requirements would require a review and possible retest of presently Listed motor-operated, household food preparing machines to determine compliance with the new performance requirements for flooding of live parts. The 20.2 and 20.3 requirements were relocated to Section 42A and will not affect the aforementioned efforts.

Impact 8

Adoption of the requirements would not require a review or retest of presently Listed motor-operated, household food preparing machines as it is a clarification of the present requirement.

Impact 10

Adoption of this proposal would require a review and possible retest of presently Listed appliances to determine compliance with the new requirements.

Impact 13

Adoption of the 7.6 and 30.3 requirements added by the revision pages dated November 29, 2001 would require a review and possible retest of presently Listed knife sharpeners and appliances provided with a mechanical sharpening block to determine compliance with the new requirements. The 7.6 requirement being proposed now was an editorial clarification only and will not affect the aforementioned efforts.

APPENDIX D**STP ROSTER FOR MOTOR-OPERATED HOUSEHOLD FOOD PREPARING MACHINES**

Name	Company	Interest Category
Edward Charkey	Self - Professional Engineer	General
Darrin Conlon	Underwriters Laboratories Inc.	User
Mark Connelly	Consumers Union	User
Jim Diescher	Intertek Technical Services	User
Richard Haffner	NSF International	User
Randy Hill	Kitchen Aid/Whirlpool	Producer
Randall Hoover	Rival/The Holmes Group	Producer
Ralph Hudnall	Sunbeam Products Inc.	Producer
Larry Johnson	National Presto	Producer
Lawrence Levine	Creative Services	General
Wayne Morris	Association of Home Appliance Manufacturers	General
William Mulligan	Applia Consumer Prod	Producer
Chris Zachwieja	Hamilton Beach/Proctor Silex	Producer
Laura Schroepfel	Underwriters Laboratories Inc.	STP Chair - Non voting member
David Wester	Underwriters Laboratories	STP Secretary - Non voting member

APPENDIX E**STP BALLOT FOR UL 982****(FOR STP MEMBERS ONLY)****STP Ballot Instructions**

The STP voting member should fill out the attached ballot and send it to the STP Secretary by the stated ballot and comment due date. Only the STP member shall return the accompanied ballot. Non-voting members should not return a ballot but may send in comments on the proposal.

STP members who have indicated that they represent the 'general interest' group comprise a category of independent consultants and experts who are generally unallied with any particular business or commercial interest. On occasion, however, independent consultants in this category may be retained by a client to advocate on behalf of the client with regard to a specific issue or issues before the STP. As to these specific issues, the STP member should not be regarded as 'general interest' because to do so could result in a balance of interests that was not intended. Therefore, STP members categorized as 'general interest' who have been retained to represent the interest of another with respect to a specific issue or issues which are to be addressed by an STP shall declare those interests to the Panel and record an "abstain" vote on any proposal, comment, or matter relating to those issues.

Comments that do not address proposals accompanying this ballot will either be logged for future consideration by the STP or addressed outside of the consensus process. Those comments include certification issues, including effective dates.

All negative ballots not supported by a reason will be categorized as "negative without comment" and will not be responded to, circulated to the STP, or notified of right to appeal.

APPENDIX EBallot

(FOR STP MEMBERS ONLY)

January 2, 2002

STP 982

Deadline for Receipt: February 15, 2002

TOPIC: Recognition of Proposed Requirements for the Fourth Edition of the Standard for Safety for Motor-Operated Household Food Preparing Machines, UL 982 as an American National Standard

QUESTION: Should these proposals be recognized for ANSI approval?

YES	NO	ABSTAIN	PROPOSALS
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1) Inclusion of Requirements for 240 Volt Products
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2) Revision to Requirements for Flooding of Live Parts
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3) Revision of Requirements for Running-Burnout Conditioning Test
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4) Addition of Requirements for Appliances Employing an Auto Pulse Function Switch
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5) Editorial Clarification for Knife Sharpeners

"NO" VOTES: In accordance with ANSI procedures, in order to receive consideration, objections must be accompanied by supporting written reason. Where possible, proposals for a solution to the problem raised should be submitted. A negative ballot not accompanied by supporting written reasons will be recorded as a "negative without comment" and is not required to be circulated. Supporting written reasons should be provided on a separate sheet.

ABSTENTIONS: If you cannot vote affirmatively or negatively and want to be recorded as abstaining, please state and explain the reasons for your abstention on a separate sheet.

Signature: _____	RETURN TO:
Please type or _____	David R. Wester
print name _____	Secretary for STP 982
Organization _____	Underwriters Laboratories Inc.
Represented _____	1285 Walt Whitman Road
	Melville, NY 11747
Phone Number _____	Phone: (631) 271-6200 (Ext.
	22559)
	Fax: (631) 439-6021
Date _____	E-mail:
	David.R.Wester@us.ul.com

ACTION

APPENDIX G**ATTENDANCE AT THE NOVEMBER 28-29, 2001 MEETING OF THE STP FOR MOTOR-OPERATED
HOUSEHOLD FOOD PREPARING MACHINES****STP Representatives**

Matt Carley (Substitute for Chris Zachwieja)
Edward Charkey*
Mark Connelly*
Jim Diescher*
Richard Haffner*
Randy W. Hill
Randall C. Hoover
Larry Hudnall*
Larry D. Johnson
Lawrence T. Levine
Wayne Morris
William R. Mulligan
Chris Zachwieja*

Hamilton Beach/Proctor-Silex Inc.
Self- Professional Engineer
Consumers Union
Intertek Technical Services
NSF International
Kitchen Aid/Whirlpool
Rival/The Holmes Group
Sunbeam Products, Inc.
National Presto Industries Inc.
Creative Services
Association of Home Appliance Manufacturers
Applia Consumer Products Inc.
Hamilton Beach/Proctor-Silex Inc.

Invited Guests

Vince Amodeo#
Joe Kata
Gerry Schmidt

Consumer Product Safety Commission
Norelco
Metal Ware Inc.

UL Staff

Jeremiah Cassel
Darrin Conlon
Paul Orr#
Deborah Prince#
Patricia Sena#
Laura Schroepel
Dave Wester

UL-Camas
UL-Melville
UL-Melville
UL-RTP
UL-Melville
UL-Melville
UL-Melville

* Not in attendance
Part time only

APPENDIX H

**ACTION ITEMS FOR WORKING HARMONIZATION DRAFT OF UL 60335-2-14 AND
REPROPOSED REQUIREMENTS FOR UL 982**

Item	Addressee	Action	Status
1	UL	Determine when next four UL Basic Safety Principles (BSP) will be available for review by STP	UL Global Standards said that development of additional BSP is TBD in response to inquiry by UL Tech Rep. The three released so far will be finalized before Jan. 2002
2	UL	Discuss UL position on marking requirements with Chief Engineer	UL Tech Rep researching several symbol marking standards to determine if there are clearly established symbols. Some of the standards being researched are ISO 3864, ISO 7000, IEC 60417, and ANSI Z535.3. Once this is completed, the UL Tech Rep will contact UL's Chief Engineer.
3	UL	Clarify intent of second bullet in NOTE 3 of paragraph 2.2.9 in IEC 60335-2-14, "-15% (or -60 W if greater) for appliances..."	Deviation from rated power input refers to using the greater of -15% or -60 W for motor-operated appliance being tested; ref. Table 1 of 10.1 in UL 60335-1. STP member confirmed this after speaking to European contact. UL Tech Rep also received confirmation of this from conformity assessment engineers in UK, Italy, and Germany.
4	UL	Define 'Brabender units' and 'farinograph.' Ref. NOTE 3 of 2.2.9 in working draft of UL 60335-2-14	STP observer reported finding from Philips: Brabender Instruments manufactures a mixer called a farinograph that records torque exerted on dough through knife-like blades. A farinograph can be used to achieve desired consistency of dough by adjusting the water level and expressing it in terms of Brabender units (500 is standard). However, this is not done very often. Flour-water mixture called out in IEC standard is usually sufficient for testing. STP member reported European contacts were not familiar with farinograph. UL Tech Rep reported findings: German contact said Brabender is a measure of viscosity but no one has used farinograph. UK contact said farinograph is not required if fresh flour is always used

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Item	Addressee	Action	Status
5	UL	Ascertain criteria for measuring age of flour used in NOTE 2 of 2.2.9.1 in working draft of UL 60335-2-14	STP observer reported finding from Philips: Newly bought flour is usually sufficient to ensure desired consistency. UL Tech Rep reported findings: German contact said flour is marked with expiration date and should be older than 2 weeks. UK contact said flour is considered new at purchase since it should be stored under strictly controlled conditions. It also has a 'best if used before' date
6	UL	Determine meaning of phrase "If necessary..." in NOTES following 2.2.9.4 and 2.2.9.5 in working draft of UL 60335-2-14 that specify temperature conditioning for consumables to be ground up	UL Tech Rep reported findings: German contact said that coffee beans require conditioning if freshly roasted or refrigerated; wheat, if refrigerated. UK contact recommends conditioning if not sure coffee beans were stored in damp conditions
7	UL	State whether temperatures recorded during IEC/UL comparison heating test represented actual temperatures or deltas	UL Tech Rep reviewed datasheets and confirmed that the temperatures recorded were maximum temperature rises and not maximum temperatures.
8	* * All STP members who represent direct manufacturers	Request manufacturers of ice-cream machines to check operation using both IEC and UL methods, and to report any differences. Ref. 2.2.9.10 in working draft of UL 60335-2-14	
9	UL/STP	Consider standardizing carrot load in 2.2.9.17 in working draft of UL 60335-2-14. Decide on consistency of carrot mixture when testing graters and shredders.	UL Tech Rep requests STP to consider adopting the IEC test method. STP members who manufacture these types of products are asked to give their opinion on the best test method for UL60335-2-14. UL will conduct input and heating tests on this type of product, and send results to STP members for their consideration.

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Item	Addressee	Action	Status
10	UL	Check temperature data recorded during IEC/UL comparison test concerning knife sharpeners that employ methods of operation (momentary contact, on-off, etc.). Ref. 2.2.9.19 in working draft of UL 60335-2-14	Temperature test data was rechecked and confirmed to be accurate. Since temperatures during IEC heating test were very high, UL Tech Rep has decided to re-conduct the testing on two samples, one with on/off switch, and one with momentary contact switch. UL will conduct input and heating tests, and send results to STP members for their consideration.
11	** ** STP member from National Presto and observer from Norelco	Determine details how 10 N is to be applied when measuring power input of electric knives while cutting. Ref. 2.2.9.21 in working draft of UL 60335-2-14	STP observer reported finding from Philips: Force is defined as that applied vertically by knife blade while making cut and should be independent of weight of knife. UL Tech Rep reported findings: German contact said force is applied to knife blade but in such a manner that its cutting function is not affected. UK contact consulted with several labs and concluded force should be applied at forward point of handle, as in normal use
12	UL	Ascertain how 'natural color' cheesecloth is ordered and identify suppliers. Ref. 4.101DV in working draft of UL 60335-2-14	UL Tech Rep reviewed all IEC 60335-based UL standards or standard proposals, and noticed that some standards require "bleached cheesecloth" and some require "cheesecloth." Based on the present requirements in UL 982, bleached cheesecloth is used in the labs. Both "bleached" and "untreated" cheesecloth may be ordered from the following two vendors: DeRoyal Textiles Inc. 141 E. York Street Camden, SC 29020 P.O. Box 400 Phone: (800) 845-1062 Fax: (803) 425-4566 www.deroyal.com/products.htm ATD-AMERICAN CO. 135 Greenwood Ave. Wyncote, PA 19095 P.O. Box 400 Phone: (800) 523-2300 ext. 2237 Fax: (215) 576-1827 Note that vendor contact information is provided for information purposes only. Vendors have not been evaluated for compliance to any internal or external requirements.

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Item	Addressee	Action	Status
13	UL	Review what is done in other Part 2 Standards concerning overall plastics requirements for enclosures. Ref. 8.1DV.2 in working draft of UL 60335-2-14.	The only IEC 60335-based UL standards that contains the same/ similar requirement as 8.1DV.2 in UL 60335-2-14 are UL 60335-2-34 (Motor Compressors) and proposed UL60335-2-40 (Heating and Cooling Equipment). The other four IEC 60335-based UL standards and proposed standards did not include this similar statement.
14	UL	Define 'detachable parts' for possible insertion into IEC 60335-1 (in lieu of retaining 8.1DV.7 in working draft of UL 60335-2-14)	UL Tech Rep suggests that the definition for a detachable part that is in the new Fourth Edition of IEC 60335-1 (Section 3.6.2), and which will be in the next new edition of UL 60335-1, be considered. The definition is as follows: "3.6.2 detachable part - part that can be removed without the aid of a tool, a part that is removed in accordance with the instructions for use, even if a tool is needed for removal, or a part that does not fulfil the test of 22.1 1. NOTE 1: If for installation purposes a part has to be removed, this part is not considered to be detachable even if the instructions state that it is to be removed. NOTE 2: Components that can be removed without the aid of a tool are considered to be detachable parts . NOTE 3: A part that can be opened is considered to be a part that can be removed.
15	UL	Determine difference between 50-80 core sand called out in UL requirements and that used by IEC. Find out if UL sand is recycled after use during test. Ref. 11.7.2DV in working draft of UL 60335-2-14	STP observer reported finding from Philips: Dry sand should be 170-250 micrometers, compared with 50-80 core sand which is 180-300 micrometers. UL Tech Rep determined that the sand is not recycled after each use. The sand is thrown out. UL purchases the sand from Unimin Corp in Illinois. The bag has the name "Accusand" on it, with the core size "50-70".

Table Continued

Item	Addressee	Action	Status
16	UL/STP	Investigate effectiveness of substituting oil-flour mixture for sand as load for food processor in heating test. Determine what is best combination of oil and flour. Ref. 11.7.2DV in working draft of UL 60335-2-14	UL Tech Rep will conduct some testing on food processor samples to determine the suitability of the oil/flour mixture. UL Tech Rep requests that other STP members that are manufacturers of food processors or hand mixers do the same and forward results to STP.
17	UL	Define wand-type mixer that will become part of NOTE to replace 11.7.6DV in working draft of UL 60335-2-14	The UL982 wand-type mixer is the same as the hand-held blender referenced in the IEC Part 2; therefore a definition would be used for clarity. The UL Tech Rep proposed the following definition: Wand-type Mixer - Hand-held appliance intended to mix or blend small amounts of food ingredients. Also known as a wand mixer or hand-held blender. The appliance is intended for one hand gripping operation.
18	*** *** STP member from Rival/The Holmes Group	Investigate feasibility of changing standard ice cube for ice crusher test. Ref. 11.101DV.3 in working draft of UL 60335-2-14	
19	UL	Insert new NOTE in Table 22.1 which states that, if an appliance voltage falls outside the ranges given in the table, it will be tested at its rated voltage but not less than 120 V. Ref. DISCUSSION for Item 6 in main text	Included in item 6 in Appendix A which contains all modified proposals that are ready to be released for STP ballot approval with meeting report

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Item	Addressee	Action	Status
20	UL	Revise paragraph 42A.1 to run flooding test on same appliance by filling liquid container, operating until liquid stops splashing out, stopping to refill container, and resuming for two more cycles (in lieu of running test for 5 minutes while continuously filling container). Ref. DISCUSSION for Item 7 in main text	Included in item 7 in in Appendix A which contains all modified proposals that are ready to be released for STP ballot approval with meeting report
21	UL	Insert new paragraph 42C.5 (formerly 42A.3 in February 1, 2001 bulletin for Subject 982) and new Exception No. 3 to 42C.1 to address an abnormal operating condition identified by the STP. Ref. DISCUSSION for Item 7 in main text	Included in item 7 in Appendix A which contains all modified proposals that are ready to be released for STP ballot approval with meeting report
22	UL	Revise paragraph 21.9.4.3 to address STP concerns about size and placement of openings in top cover of blenders, leakage of hot liquids being blended, and pressure relief. Ref. DISCUSSION for Item 9 in main text	UL Tech Rep has forwarded revised and new requirements to several STP members for preliminary comment. When ready, this proposal will be in a separate bulletin from meeting report.

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Item	Addressee	Action	Status
23	UL	Insert new Exception No. 2 to paragraph 21.7.11 which states that an appliance with an auto-pulse function may indicate the activation of this function by visual means, such as an indicator or a depressed button. Ref. DISCUSSION for Item 10 in main text	Included in item 10 in Appendix A which contains all modified proposals that are ready to be released for STP ballot approval with meeting report
24	**** **** All STP members who represent direct manufacturers	Determine interval, if possible, between auto-pulses for appliances designed with such a function. Also note if red indicator light, for appliances so equipped, extinguishes while auto-pulse is engaged	

APPENDIX I**QUESTIONS BROUGHT UP FROM NOVEMBER'S STP MEETING****Q1. Section 2.2.9, Note 3, states the following:**

"Operation at rated power input is considered as being more unfavorable if the power input determined during the test of 10.1 differs from the rated power input by more than

- 20 % for appliances having a rated power input not exceeding 300 W;
- 15 % (or -60 W if greater) for appliances having a rated power input exceeding 300 W."

The question is concerning the "if greater" requirement. What does this mean? I understand this to mean that whichever is the greater deviation. That is, the requirement is -15%, but if the -15% deviation is greater than -60 W, then the -60 W is the maximum allowed deviation.

For example, a 1000 W product would use the -60 W deviation, and not the -15% deviation.

A1 - ANSWERS:

From Germany: The meaning is, if you have a wattage of 1000W, the valid limit is 940W and not 850W.

From UK: Normal operation is @ the most unfavourable eg:

I/P rated 250W but measures 199W = -20.4%

then operated @ 250W.

I/P rated 250W but measures 201W = -19.6%

then operated @ 201W.

I/P rated 1000W but measures 845W = -15.5%

940W = - 60W

then operated @ 1000W.

From Wayne's contact: *The value - 60W is applied when the gap of measured powers is upper - 15 %.*

E.g. :

- allotted power : 330 W
- power measured in section 10.1 : 227 W
- power gap : upper - 15 % (- 16 %)

The value - 60 % is applied.

$$330 \text{ W} - 60 \text{ W} = 270 \text{ W}$$

In this case, the test conditions set in section 10.1 are considered as unfavourable for the functioning at the allotted power.

Q2. How is the age of the flour determined in accordance with Note 2 of section 2.2.9.1? Are the bags of flour purchased by consumers dated?

A2 - ANSWERS:

From Germany: The problem is fresh flour. It should be older than 2 weeks. It will be discussed in the committee. In Germany we only have it marked with the expiry date.

From UK: The flour is considered new @ purchase as it should have been stored under strict conditions, it also has a best before date and a bar code on the packet together with a customer help line number for any queries (a manufacturers help line +44 (0) 800 783 4321).

Q3. Section 2.2.9.1, Note 3, states the following:

"NOTE 3 - In case of doubt, the quantity of water is 1,2 times that necessary for the consistency of the mixture to be 500 Brabender units at 29 degrees \pm 1°C. measured using a farinograph."

What are Brabender units, and what is a farinograph? Where could we obtain a farinograph?

A3 - ANSWERS:

From Germany: Brabender is a scale for viscosity and the equipment to measure it is the farinograph. But really nobody he asked had ever seen this. It will be discussed in the committee.

From UK: Call up www.ask.co.uk (ask Jeeves). If you follow UK recommendation for Q2, you will not require this very expensive equipment.

From Wayne Morris' contact: We do not know Brabender unit.

After having investigated on the subject,

- farin manufacturers do not also know it, and
- measurement equipment manufacturers neither.

We are going to try to find additive information. LCIE (our French laboratory) uses flours type 45, by taking into account expiry date.

From Joe Kata's contact: Dough strength is determined on a recording mixer called a Farinograph (made by: Brabender Instruments): Knife-like zigzag rotating blades chop through the dough, and measure the torque on the dough. The dough is adjusted to a standard consistency by adjusting the water level until the farinograph reads 500 Brabender units. This is only done in case of doubt (which is very seldom); normally the amounts of flour and water mentioned in the standard are used.

Normally, newly bought flour from the shop is consistent enough. If there is doubt, the above mentioned farinograph can be used to adjust the amount of water so at least the dough is consistent. In praxis there are other parameters with more influence, so even KEMA does not use the farinograph.

Q4. What does the phrase "if necessary" mean in the Note of 2.2.9.4? What determines if the coffee beans have to be conditioned?

A4 - ANSWERS:

From Germany: conditioning is needed if the beans are fresh roasted or are stored in a refrigerator. Same with wheat grain.

From UK: If in doubt, condition it to make sure they haven't been stored in damp conditions.

Q5. Same question as 4 above for 2.2.9.5, what determines if the wheat grain has to be conditioned?

A5 - ANSWERS:

From Germany: conditioning is needed if the beans are fresh roasted or are stored in a refrigerator. Same with wheat grain.

From UK: If in doubt, condition it to make sure they haven't been stored in damp conditions.

Q6. In 2.2.9.21, how is the 10 N force applied to the electric knife? Is this applied at the knife handle? Is it applied on the cutting blade of the knife? Is it applied uniformly or is it a point-load force application?

A6 - ANSWERS:

From Germany: The force is applied to the blade of the knife. The force is applied in a manner that the function of the blades is not affected.

From UK: Having consulted 2 other labs, it is agreed to apply the force at the forward point of the handle as in normal operation.

From Joe Kata's contact: The force of 10N should be read as the force that the knife applies (vertically) to the sausage. This is to make the test independent of the weight of the knife.

APPENDIX J**DESIGNATED RESPONSIBILITY FOR UL PRODUCT CATEGORY****IPWZ, FOOD-PREPARING MACHINES, HOUSEHOLD**

The individuals shown in the following table are involved with the investigation of products covered under the subject category. The Primary Designated Engineer (**shown in UPPERCASE letters**) coordinates the establishment and uniform interpretation of UL requirements applicable to the product category. The Designated Engineers (**shown in lowercase letters**) work with the Primary Designated Engineer to interpret requirements and maintain standards.

Should you have questions regarding the interpretation of the requirements proposed in this bulletin or any adopted requirements that affect your product, you are encouraged to contact the individual at the office to which you normally submit your products.

The Responsible Department Manager for the subject category is John Smith at UL's Melville office. The Responsible Department Manager oversees the significant interpretations made by the Primary Designated Engineer and arbitrates any differences regarding interpretation of UL requirements.

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